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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/651,058	08/30/2000	Shoutarou Yoda	107156-00019	1169

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EXAMINER	
CHAWAN, VIJAY B	
ART UNIT	**PAPER NUMBER**
2654	

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/651,058	YODA, SHOUTAROU	
	Examiner	Art Unit	
	Vijay B. Chawan	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/19/04*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-9,11-15,17 and 18* is/are rejected.

7)☒ Claim(s) *4,10 and 16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1,7, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flanagan et al., (5,737,485) in view of DeLine et al., (6,420,975).

As per claim 1, Flanagan et al., teach a speech recognition system, comprising:

a plurality of voice pickup means for picking up uttered voices, said plurality of voice pickup means being arranged in each neighborhood of said plurality of seats, respectively (Fig.1, item 2);

determination means for determining a speech signal suitable for speech recognition from speech signals output from said plurality of voice pickup means (Fig.1, item 14); and,

speech recognition means for performing for performing speech recognition based on said speech signal determined by said determination means, wherein said speech recognition means comprises a single unit capable of performing speech recognition for a plurality of voices (Fig.1, item 6).

Flanagan et al., while teaching picking up of plurality of uttered voices, do not specifically teach it in an automobile or vehicle environment. DeLine et al., however do teach speech recognition in an automobile with plurality of seats (Col.3, line 13- Col.4,

line 17). Therefore, it would have been obvious to one with ordinary skill in the art at the time of invention to incorporate the teachings of DeLine et al., in the system of Flanagan et al., because this would effectively distinguish vocal speech input from a particular user from non-vocal or ambient noise present in the vehicle cabin.

3. Claims 2-3, 6, 8-9, 12, 14-15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flanagan et al., (5,737,485) in view of DeLine et al., (6,420,975) as applied to claims 1,7 and 13 above, and further in view of Fedele (4,627,091).

As per claims 2, 8, and 14, Flanagan et al., in view of DeLine et al., teach the speech recognition system and method according to claims 1, 7 and 13. However, the combination of Flanagan et al., in view of DeLine et al., do not specifically teach details of determining voice. Fedele teaches a signal wherein whose speech level is equal to or higher than a predetermined speech level and continues over a predetermined period of time is selected as said speech signal suitable for speech recognition (threshold or trigger, Col.1, lines 27-32, and Col.3, line 33) and continues over a predetermined period of time is determined as a speech signal suitable for speech recognition (Fig.1). Therefore, it would have been obvious to one with ordinary skill in the art at the time of invention to incorporate the well-known criteria disclosed by Fedele in the combination of Flanagan et al., in view of DeLine et al., because this would limit voice processing to actual voice and therefore avoid misrecognized commands triggered from background noise.

As per claims 3, 9, and 15, Flanagan et al., in view of DeLine et al., teach the speech recognition system and method according to claims 1, 7 and 13. However, the combination of Flanagan et al., in view of DeLine et al., do not specifically teach a threshold. Fedele teaches acquiring an average S/N value and average voice power of each of the speech signals output from the plurality of voice pickup (Col.6, lines 60-68), and selects that of the speech signal whose average S/N value and average voice power are greater than respective predetermined threshold values (Col.5, lines 36-45, as the speech signal suitable for speech recognition (Col.6, lines 33-38).

Therefore it would have been obvious to one with ordinary skill in the art at the time of invention, to apply the teaching of Fedele to the device/method of Flanagan et al., in view of DeLine et al., to store speech and limit the amount of data being stored.

As per claims 6,12, and 18, Flanagan et al., in view of DeLine et al., teach the speech recognition system and method according to claims 1, 7 and 13. However, the combination of Flanagan et al., in view of DeLine et al., do not specifically teach the feature defining that the unsuitability of other speech signals (than the speech signal suitable for speech recognition, that speech signal), whose average S/N value and average voice power become minimum is treated as a noise signal by the determination well known in the art of speech processing as taught by Fedele (Col.2, lines 13-18). It would have been obvious to one with ordinary skill in the art at the time of invention to incorporate the teachings of Fedele in the system/method of Flanagan et al., in view of DeLine et al., because this would effectively provide continuity for complex command sequences, and accurately identify and process levels as noise or speech.

4. Claims 5, 11, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flanagan et al., (5,737,485) in view of DeLine et al., (6,420,975) as applied to claims 1, 7, and 13 above, and further in view of Fedele (4,627,091), and further in view of Bowen (5,561,737).

Flanagan et al., in view of DeLine et al., further in view of Fedele, teach recognizing noise in speech (Flanagan et al., Fig.2, item 12), but does not specify processing and where Fedele simply disregards non-speech (Col.3, lines 28-370. Neither Flanagan et al., DeLine et al., nor Fedele specify discriminate processing of noise. Bowen, however, does teach treating those of the speech signals, which are other the speech signal suitable for speech recognition as noise signals (Col.8, line 66 – Col.9, line 1). Therefore, it would have been obvious to a person with ordinary skill in the art at the time of invention, to incorporate Bowen's teachings in the system/method of Flanagan et al., in view of DeLine et al., in view of Fedele, because this would effectively distinguish between speech commands and noise.

Claims 13-18 are directed toward a method to be implemented on the system of claims 7-12, and are similar in scope and content and are rejected under similar rationale.

Allowable Subject Matter

5. Claims 4, 10, 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Everhart et al., (6,240,347) teach vehicle accessory control with integrated voice and manual activation.

Launey et al., (5,086,385) teach expandable home automation system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vijay B. Chawan whose telephone number is (571) 272-7601. The examiner can normally be reached on Monday Through Thursday 7-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vijay B. Chawan
Primary Examiner
Art Unit 2654

vbc
5/30/05

VIJAY CHAWAN
PRIMARY EXAMINER